

The AESO requests that the deliverables outlined in the table below are submitted in the timelines specified in the table so that the AESO can complete its review of the information received, meet our reporting obligations, and ensure the AESO System Coordination Centre operating personnel have the necessary information for training and to operate the system in a safe, reliable and efficient manner. Failure to meet the delivery of data requirements within the specified timelines may result in energization delays. If there are concerns with meeting the timelines specified in the table below, contact the AESO Project Manager as soon as possible to address the concerns.

Please submit all data in the formats specified in the table below and package all related documents for a deliverable into sub folders titled with the outlined package number (see table below). Attach the folder to your e-mail as a zip file. Please name the zip file with the project number and increment D1, D2, etc. for each delivery required (i.e. 0000_Energization_PackageD1.zip). All information should be sent directly to the AESO Project Manager.

AESO Energization Package Deliverable Requirements:

100 Days BEFORE Energization

EP# and Package	Deliverable	Description	Timeline¹	Format
1	Staging Plan	Authenticated Single Line Diagram(s) "SLD" that provides a description of the various configurations that a project will transition through until the ultimate or final configuration is energized. Also need to include if applicable: <ul style="list-style-type: none"> • Ampacity Diagram • D-Curves 	100 days before	Authenticated Single Line Diagram(s)
2	Stage 5 PDUP	Refer to the latest version of the AESO Project Data Update Package – Instruction Manual (PDUP-IM) for requirements.	100 days before	Authenticated PDF Package
3	Preliminary Commissioning Plan	Is a draft (preliminary) detailed explanation of: <ul style="list-style-type: none"> • How the project will be energized. • Steps and activities to occur in order for equipment to be energized. • The process of commissioning for SCADA points and timing. 	100 days before	Word/PDF

EP# and Package	Deliverable	Description	Timeline ¹	Format
4	Preliminary SCADA Point List	<p>A list that identifies analog, status and accumulator points for data communication that match the points specified in the Functional Specification.</p> <p>Each SCADA point needs to have a description listed with it. In addition to the list the transmission facility owner must provide a communication/SCADA contact person for issue resolution.</p>	100 days before	Excel/PDF
5	Pre-Energization Communication Block Diagram	The transmission facility owner shall provide a simplified communication block diagram detailing the “designed” communication path for communication troubleshooting purposes. Refer to ISO Rules Section 502.8.	100 days before	PDF
6	Installation confirmation	Written confirmation that installation meets the functional specification and connection requirements. This should be provided in a formal letter to the AESO Project Manager.	100 days before	Formal Letter
7	Remedial Action Scheme (RAS) and Special Protection Scheme Procedure Data	Detailed description of the RAS operating procedures. Word format is preferred, but the AESO will accept PDF file format.	100 days before	Word/PDF
8	Phasor Measurement Unit (PMU) Three Line Diagrams	An authenticated Three Line Diagram that represents the physical connections of the facility. The PT (Potential Transformer) and CT (Current Transformer) ratios of the connections for the PMU inputs must be specified. Also include any other PMU-related supporting documentation (i.e. user guides, commissioning report).	100 days before	Authenticated Single Line Diagram(s)

EP# and Package	Deliverable	Description	Timeline ¹	Format
9	GIS mapping data for any facility (line or station) that has been physically changed through the project	A set of shape files containing preliminary GIS data for any new facility (line or station) that will be made. Also any existing (line or station) physically changed through the project. This includes substation boundaries and new or rerouted transmission lines. Refer to the latest version of the AESO GIS Data Requirements for further information.	100 days before	Shape Format (NAD83)
10	Measurement Point Definition Record (MPDR) metering SLD	Provide the metering SLD (Single Line Diagram) for the project that indicates the revenue metering.	100 days before	PDF
11	Connection Order	The Connection Order issued by the AUC for the interconnection of a generator to the AIES or for the interconnection of two transmission elements owned by different parties. Refer to AUC Rule 007 Section 5.	100 days before	PDF

30 Days BEFORE Energization

EP# and Package	Deliverable	Description	Timeline ¹	Format
12	Final Commissioning Plan	<p>The final detailed explanation of <i>(including any changes requested by the AESO)</i>:</p> <ul style="list-style-type: none"> • How the project will be energized. • Steps and activities to occur in order for equipment to be energized/commissioned/tested while connected to the grid. • The process of commissioning for SCADA points and timing. <p>Note: Testing of the SCADA must be done between the TFO and the AESO prior to issuing of the Energization Checklist.</p>	30 days before	Word/PDF

13	Written confirmation that Joint Operating Procedures (JOP) in place by providing confirmation of receipt of the signed Interconnection Agreement.	Written confirmation in the form of a formal letter to the AESO Project Manager from the facility owner that a JOP is in place by providing a confirmation of receipt of the Interconnection Agreement.	30 days before	Formal Letter
14	Written confirmation from TFO that RAS and special protection schemes identified in the Functional Specification have been <u>successfully tested and are ready for energization.</u>	Written confirmation in the form of a formal letter to the AESO Project Manager from the facility owner that the required RAS or Special Protection Schemes identified in the Functional Specification have been tested and are ready for energization. Must meet the requirements for ISO Rules Section 502.8. Please note that unless otherwise identified in the deficiencies section of the Energization Checklist, the RAS in-service date is to be the same as the energization date.	30 days before	Formal Letter

AFTER Energization

EP# and Package	Deliverable	Description	Timeline ¹	Format
15	As Built SCADA Points	An “as-built” SCADA point list. The “as-built” serves to record and report any variances from the points specified within the Functional Specification.	60 days after	Excel/PDF
16	Model Validation Report (formerly WECC Report) – Generator Projects Only	A commissioning report that is provided by the generator facility owner to the AESO after the commissioning has been completed. The AESO reviews the report and submits to WECC (Western Electricity Coordinating Council). Refer to ISO Rules Section 502.6.	60 days after	Report
17	Communication Block As Built Diagram	The facility owner shall provide a simplified communication block diagram detailing the “As Built”	90 days after	PDF

		communication path for communication troubleshooting purposes. Refer to ISO Rules Section 502.8.		
18	As Built Final Substation SLD	The facility owner shall provide a single line diagram (SLD) detailing the "As Built" substation.	30 days after	PDF

¹ Timelines presented may be adjusted by the AESO Project Manager in conjunction with AESO Operations in consideration of project complexity or other project factors that may impact or influence a deliverable(s). Therefore, timelines presented may not represent typical project timeline expectations. All timelines are days prior to energization unless otherwise specified.